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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/203,853	12/02/1998	DAVID WILLIAM WIGGINS	492-1007	4737
23644	7590	08/07/2006		
BARNES & THORNBURG, LLP P.O. BOX 2786 CHICAGO, IL 60690-2786				
			EXAMINER LY, ANH VU H	
			ART UNIT 2616	PAPER NUMBER

DATE MAILED: 08/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	09/203,853	WIGGINS ET AL.	
	Examiner	Art Unit	
	Anh-Vu H. Ly	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 85-144 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 85-144 is/are rejected.
- 7) ☒ Claim(s) 94,107,110,117-130,137 and 140 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 20, 2006 has been entered.

Claim Objections

2. Claims 94, 107, 110, 117-130, 137, and 140 are objected to because of the following informalities:

With respect to claims 94, 110, 126, and 140 in line 3, replace “the set” with --a set--.

With respect to claims 107 and 137, the limitation as recited in lines 1-2 “wherein said data is received from an Ethernet network” is conflicted with the limitation recited in line 3 of independent claim 101 “receiving frame based data transmitted over a synchronous digital network” or in lines 2-3 of independent claim 131 “an input for receiving frame based data transmitted over a synchronous digital network”.

With respect to claim 117, in line 11, the limitation “operable to” is not a positive limitation but only requires the ability to so perform. Therefore, it does not limit a claim to a particular structure and does not limit the scope of a claim or claim limitation.

Claims 108, 118-130, and 138 are automatically objected to as they depend upon objected dependent claims 107 and 137 and independent claim 117. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 85-144 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramakrishnan (US Patent No. 6,167,029) in view of Partridge (US Patent No. 6,370,579 B1).

With respect to claims 85-87, 101-103, 117-119, and 131-133, Ramakrishnan discloses a method of controlling flow of frame based data (Fig. 7) comprising the steps of:

receiving frame based data at a local frame based data channel interface at a first rate of reception and storing said data in a buffer (col. 7, lines 20-22); monitoring an amount of said data stored in said buffer with respect to a data amount threshold level for said buffer (col. 7, lines 25-27); determining that said amount is greater than said threshold level (col. 7, lines 40-41); in response to said step of determining, generating a signal for adapting said first rate to a second rate of reception lower than said first rate (col. 7, lines 41-44. Herein the pause frame inhibits data transmission for a period of time, e.g., 0-4 timeslots (col. 6, lines 57-59) therefore the rate is zero (second rate), which is different than previously transmitted rate (first rate) before generating the pause frame).

Ramakrishnan discloses that the flow control provided by the invention is particularly suitable for high-speed networks (col. 5, lines 60-62). Ramakrishnan does not disclose that high-speed network is synchronous digital network for data transmissions. Partridge discloses that

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many WANs use SONET because it can accommodate different protocols and bandwidths such as T-1, T-3, and E-1. High speed SONET networks can transmit data at approximately 10-Gbps or OC-192. The SONET and SDH operate at multiples of 51.85 Mbps to allow for efficient conversion from one data rate to the other (col. 1, lines 42-59). This implies that SONET and/or SDH networks are high-speed networks. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of Ramakrishnan and Partridge implementing the flow control in SDH or SONET, to prevent network congestions.

With respect to claims 88-89, 104-105, 120-121, and 134-135, Ramakrishnan discloses that wherein said data is received from an Ethernet network and data is Ethernet data (Fig. 2C and col. 5, lines 60-62).

With respect to claims 90, 106, 122, and 136, Ramakrishnan discloses that wherein said signal comprises a pause frame (col. 7, lines 40-44).

With respect to claims 91, 107, 123, and 137, Ramakrishnan discloses that wherein said data is received from an Ethernet network (col. 5, lines 60-62) and said pause frame is an Ethernet pause frame (col. 7, lines 40-44).

With respect to claims 92, 108, 124, and 138, Ramakrishnan discloses that wherein said pause frame specifies a time interval for inhibiting further transmissions from said Ethernet network (col. 9, lines 64-66).

With respect to claims 93, 109, 125, and 139, Ramakrishnan discloses that wherein said buffer further comprises data storage locations configurable to store at least one data frame (Fig. 6).

With respect to claims 94, 110, 126, and 140, Ramakrishnan discloses that wherein said buffer has a size equal to a number of maximum length Ethernet frames, and the number being selectable from a set comprising 4 and 6 (Fig. 6, receiver buffer 606 contains storage locations for a plurality of Ethernet frames).

With respect to claims 95, 111, 127, and 141, Ramakrishnan discloses that wherein said buffer comprises, above said threshold level, an amount of data storage capacity equal to the size of two maximum length Ethernet frames (col. 7, lines 29-33 discloses that the AF level 608 indicates the amount of data stored in the receive buffer 606 is nearing its maximum capacity. The AF level can indicate that the receive buffer is at 95% capacity. Herein, the extra 5% can store at least two variable length Ethernet frames).

With respect to claims 96, 112, 128, and 142, Ramakrishnan discloses that wherein said buffer is configured as FIFO queue (col. 7, line 18).

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With respect to claims 97, 113, 129, and 143, Ramakrishnan discloses a buffer unit (Fig. 6). Ramakrishnan does not disclose that the buffer is configured as circular buffer. However, circular buffer is well known in the art. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have circular buffer in Ramakrishnan's system, since circular buffer including pointers for pointing to next data object in the buffer and length value that specifies how many objects are currently in the buffer.

With respect to claims 98, 114, 130, and 144, Ramakrishnan discloses sending said generated signal over said interface (Fig. 11, physical medium 1106a).

With respect to claims 99 and 115, Ramakrishnan discloses that wherein said step of sending is performed substantially immediately after said step of determining (col. 9, lines 17-19).

With respect to claims 100 and 116, Ramakrishnan discloses that wherein said step of sending is performed upon completing transmission of a data frame currently being transmitted at said interface (col. 9, lines 22-28).


Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh-Vu H. Ly whose telephone number is 571-272-3175. The examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

avl


CHI PHAM
SUPERVISORY PATENT EXAMINER 8/2/06